AMENDMENTS TO THE CLAIMS

The following is a copy of Applicants' claims that identifies language being added with underlining ("___") and language being deleted with strikethrough ("——"), as is applicable:

1-43. (Cancelled)

44. (Cancelled)

45. (Currently Amended)   The system of claim [[44]] 49, wherein each of the network messages includes a device identifier, which is associated with the network device that transmits the network message to the controller.

46. (Previously Presented) The system of claim 45, wherein each of the network messages includes a transport stream identifier, which is associated with a given transport stream, wherein the given transport stream is a transport stream received and monitored by the device associated with the device identifier.

47. (Currently Amended)   The system of claim [[45]] 49, wherein each of the network messages includes network information related to at least one characteristic of the digital network.

48. (Cancelled)

49. (Currently Amended)   ~~The system of claim 48,~~ A system for mapping a digital network, the system comprising:

   a controller configured to send an initiate signal; and

   a plurality of network devices in communication with the controller, each network device configured to receive a transport stream that includes a stream of data packets, each data

packet including a header and a data payload, each of the plurality of network devices further

configured to receive the initiate signal from the controller;

wherein, in response to receiving the initiate signal from the controller, each of the

plurality of network devices generates a network message and sends the network message to

the controller, the network message including information associated with the respective

network device; and

wherein, in response to receiving the network messages from the network devices, the

controller generates a transport stream map, the transport stream map representing a flow of

transport streams among the plurality of network devices,

wherein each of the network messages includes an input transport stream identifier

(input TSID) and an output transport stream identifier (output TSID), the input TSID identifying

the transport stream received by the respective network device and the output TSID identifying

the transport stream transmitted by the respective network device,

wherein the controller is further configured to determine if a conflict exists between two

TSIDs, and, in response to determining that a conflict exists, creating unique TSIDs to resolve

the conflict.

50. (Previously Presented)   The system of claim 49, wherein the controller is

configured to transmit a message to a particular device associated with the conflicting

TSID, and in response to the second message, to remap the output TSID to the unique

TSID.

51. (Previously Presented)   A method of mapping a digital network, the method

comprising:

transmitting an initiate signal to a plurality of devices within the digital network, the

plurality of devices configured to transmit and receive transport streams, wherein the initiate

signal is a request for information;

receiving a network message from each of the plurality of devices, each network message including a device identifier for identifying the respective device, an input transport stream identifier for identifying one or more transport streams that the respective device receives, and an output transport stream identifier for identifying one or more transport streams that the respective device transmits; and

in response to receiving the network messages from the plurality of devices, grouping the devices into tiers and associating a first device of a first tier with a second device of a second tier based on information related to the input transport stream identifiers and output transport stream identifiers.

52. (Previously Presented)   The method of claim 51, wherein grouping the devices further comprises:

using the device identifier included in each of the network messages and a table to group the plurality of devices into tiers.

using the device identifier included in each of the network messages and a table to group the plurality of devices into tiers.

53. (Previously Presented)   The method of claim 51, wherein the input transport stream identifier includes a network transport stream source indicator.

54. (Previously Presented)   The method of claim 53, wherein the network transport stream source indicator is a predetermined value for a device that is a source of a network transport stream in the digital network.

55. (Previously Presented)   The method of claim 51, further comprising:

determining whether a particular transport stream identifier associated with a particular transport stream of a plurality of transport streams transmitted from a particular device of a

given tier is the same as one or more transport stream identifiers associated with other transport streams transmitted from one or more devices of the given tier;

responsive to determining the particular transport stream identifier is not the same, associating the particular device with the particular transport stream identifier;

responsive to determining the particular transport stream identifier is the same:

determining a new transport stream identifier for the particular transport stream, wherein the new transport stream identifier is different from other transport stream identifiers associated with transport streams transmitted from the devices of the given tier;

transmitting a remap message to the particular device, wherein the particular device responds thereto by remapping the particular transport stream identifier associated with the particular transport stream to the new transport stream identifier; and

associating the particular device with the new transport stream identifier.

56. (Previously Presented)   The method of claim 65, wherein, after transmitting the remap message, the method further comprises:

receiving another network message from a second particular device, wherein the second particular device receives the particular transport stream transmitted from the first particular device.

57. (Previously Presented)   The method of claim 56, wherein the second particular device sends the other network message responsive to the first particular device remapping the particular transport stream identifier associated with the particular transport stream.

58. (Previously Presented)   The method of claim 55, further comprising:

associating the particular device with at least one input transport stream identifier, wherein the network message from the particular device includes the at least one transport

stream identifier, which is associated with the at least one transport stream received in the particular device.

59. (Previously Presented) A method of mapping a digital network, the method comprising:

assigning a unique transport stream identifier to each transport stream of a plurality of transport streams, wherein the plurality of transport streams are transmitted from a plurality of devices included in the digital network and wherein each device of the plurality of devices transmits a plurality of transport streams;

associating each assigned unique transport stream identifier with a particular device of the plurality of devices, wherein the particular device transmits the transport stream having the unique transport stream identifier assigned thereto;

transmitting to each device of the plurality of devices an assigned unique transport stream identifier associated therewith;

receiving a network message from multiple devices of the plurality of devices, each network message including at least one input transport stream identifier; and

using the multiple network messages to determine a hierarchy of devices for the plurality of devices.

60. (Previously Presented) The method of claim 59, wherein the at least one input transport stream identifier is one of the unique transport stream identifiers.

61. (Previously Presented) The method of claim 59, wherein using the multiple network messages further comprises:

associating a first device of the plurality of devices with a second device of the multiple devices, wherein the at least one input transport stream identifier of the network message from

the second device includes at least one unique transport stream identifier associated with the first device.

62. (Previously Presented)   The method of claim 59, further comprising:

prior to assigning the unique transport stream identifier, receiving a second network message from the plurality of devices, each second network message including an output transport stream identifier.

63. (Previously Presented)   The method of claim 62, wherein assigning the unique transport stream identifier further comprises:

using the output transport stream identifier included in each second network message from the plurality of devices to assign the unique transport stream identifier.

64. (Currently Amended)   The method of claim 62, wherein, prior to receiving the second network message, the method further comprises:

sending a mapping initiation message to a second plurality of devices included in the digital network, wherein the second plurality of devices includes the first plurality of devices, and each of the first plurality of devices respond to the mapping initiation message by sending the second network message.

65. (Currently Amended)   The method of claim 64, further comprising:

determining whether the first plurality of devices is the same as the second plurality of devices; and

responsive to determining that the first plurality of devices is not the same as the second plurality of devices, generating an alert message.

66. (Previously Presented)   The method of claim 59, further comprising:

prior to the step of assigning, receiving a second network message from the plurality of devices, each second network message per device including a transmitter identifier associated with the device sending the message.

67. (Previously Presented)   The method of claim 66, wherein the step of associating further comprises:

using the transmitter identifier included in each second network message from the plurality of devices to associate each assigned unique transport stream identifier with the particular device that transmits the transport stream having the unique transport stream identifier assigned thereto.

68. (Currently Amended)   The method of claim 66, wherein, prior to receiving the second network message, the method further comprises:

sending a mapping initiation message to a second plurality of devices included in the digital network, wherein the second plurality of devices includes the ~~first~~ plurality of devices, and each of the ~~first~~ plurality of devices respond to the mapping initiation message by sending the second network message.

69. (Previously Presented)   The method of claim 68, further comprising:

determining whether the ~~first~~ plurality of devices is the same as the second plurality of devices; and

responsive to determining the ~~first~~ plurality of devices is not the same as the second plurality of devices, generating an alert message.